

protein comprises a] said fusion protein [partner that] is approximately a 38 kDa T7 gene 10 product.

20. (Amended) A diagnostic reagent for early detection of Lyme disease produced by [using] a method [for producing recombinant FlaA or P37 protein] comprising: providing freshly transformed host cells; constructing a DNA expression vector containing an expressible FlaA encoding DNA sequence; transforming a suitable host cell with said expression vector; plating out said transformed host cells; preparing large scale primary cell cultures from transformed host cells taken from a fresh transformant colony; and inducing FlaA [or P37] protein expression from said host cells in culture to [obtain] produce a recombinant FlaA [or P37] protein.

21. (Amended) A diagnostic reagent as in claim 20 wherein said diagnostic reagent is [comprising the entire amino acid sequence] encoded by a [the] nucleic acid sequence as shown in SEQ ID NO: 1.

22. (Amended) A diagnostic reagent as in claim 20 comprising an [the partial] amino acid sequence as shown in SEQ ID NO: 2 and antigenic fragments thereof sufficient to produce an immunogenic response.

23. (Amended) A diagnostic reagent as in claim 20 further comprising [the partial amino acid sequence encoded by the nucleic acid sequence as shown in SEQ ID NO: 3] amplifying a nucleic acid sequence encoding an FlaA protein with nucleic acid primers selected from the group consisting of SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5 and SEQ ID NO:6 and complementary sequences thereof.

24. (Amended) A diagnostic reagent as in claim 20 wherein [the] said recombinant FlaA [or P37] protein is a fusion protein.

25. (Amended) A diagnostic reagent as in claim 24[20] wherein [the] said [recombinant FlaA or P37 protein comprises a] fusion protein [partner that is approximately] is a 38 kDa T<sup>7</sup> gene 10 product.

26. (Amended) A [recombinant FlaA protein] diagnostic reagent as in claim 20 wherein said transformed host cell is an E. Coli cell.

28. (Amended) A host cell containing the nucleic acid sequence of claim 21 [15] or a

29. (Amended) An expression vector comprising the nucleic acid sequence of claim  
21 [15] or a complement thereof.